MULTIMEDIA UNIVERSITY

STUDENT ID NO

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FINAL EXAMINATION

TRIMESTER 1, 2022/2023 (2215)

BSH3044 – OCCUPATIONAL SAFETY AND HEALTH

(All sections / Groups)

21 DECEMBER 2022
9.00am – 11.00am
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **THREE** pages with **TWO** sections only.

2. Section A: **ONE** Case Study. Attempt **ALL** questions.
   Section B: **THREE** Structural Questions. Attempt **ALL** questions.

3. Please write all your answers in the answer booklet provided.

SECTION A: CASE STUDY (40 marks)

Eliminating Risks at The Source

Work-related fatalities are often associated with the unsafe design of machinery, plant and powered tools. A lot of equipment used in Australian workplaces is designed and manufactured overseas. This can lead to inappropriate equipment being brought to and used in Australia, because of varying safety standards in other countries. WorkSafe Victoria inspectors have seen a lot of unsafe equipment in use during workplace visits, most of which is imported from overseas. Rather than just telling businesses to fix the machine, WorkSafe recognised it would be better if the design faults were eliminated before purchase.

This led to WorkSafe developing an operational program called the 'Supply Chain – Machinery' program. The program collected information about unsafe machinery, investigated the risks along the supply chains, and encouraged improved design and manufacturing standards. When cases of poor design were identified, WorkSafe Victoria worked with the designers, manufacturers, and suppliers of the machine as well as technical specialists, industry associations and other industry stakeholders to investigate and discuss best practice solutions. The designers and manufacturers then used those insights from the program to improve the design and safety of similar machines.

Example one: Safer dough moulders

Inspectors found that dough moulders were involved in a number of serious injuries. WorkSafe worked with manufacturers, suppliers, technical specialists and the industry association, the Bakers Association, on practical control solutions. The Bakers Association then advised its members about the solutions as well as providing them with general advice on safety issues to consider when buying new equipment.

Example two: Chinese hoists

There were safety problems found with hoists produced by a Chinese manufacturer. WorkSafe worked with the local Victorian supplier to contact the overseas manufacturer. Once the manufacturer was educated on the identified risks and how these could be controlled, they worked with the designer to alter the design of future models. As the manufacturer wished to continue to sell similar models in Australia, they were pleased the fault had been identified and resolved. The strength of WorkSafe's operational approach is its ability to quickly identify serious risks associated with commonly used items and then coordinate responses to try to eliminate all known instances of that risk. Importantly, if a machinery risk is common across an entire industry, the assistance of industry associations is sought to tell their members about the risk and control options.

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By eliminating the risk at its source, WorkSafe are reducing the incidents associated with unsafe machines. By working with industry associations, WorkSafe has been able to get the important messages about risks associated with unsafe machines out to workplaces. Two approaches used by WorkSafe are; provision of practical information and advice on prioritising safety in procurement processes and targeted mail outs to workplaces identified as having purchased items of unsafe machinery in advance of further compliance activities.

(Adapted from: http://www.safeworkaustralia.gov.au/sites/swa/australian-strategy/case-studies/pages/eliminating-risks)

QUESTIONS

(a) Based on the case above, explain **TWO (2)** strategies taken by WorkSafe Victoria in reducing workplace accidents.

(10 marks)

(b) Suggest **FIVE (5)** steps of hazard control methods for unsafe machines in every organisation.

(20 marks)

(c) Discuss **FIVE (5)** strategies how organisation can eliminate accidents in the future?

(10 marks)

(Total: 40 marks)

Continued....

SECTION B: STRUCTURED QUESTIONS (60 marks)
ANSWER ALL QUESTIONS

QUESTION 1

Toxic substance has a negative effect on health of a person or animal. Toxic effects are a function of several factors including properties, amount of dose, level of exposure and many more.

(a) Explain **FOUR (4)** ways whereby airborne toxic can penetrate human body.

(10 marks)

(b) Discuss **FOUR (4)** ways in ensuring prevention strategies are implemented in the workplace?

(10 marks)
(Total: 20 marks)

QUESTION 2

Suggest **FIVE (5)** ways to ensure safety and health visual aids can help employees in reducing workplace accidents.

(20 marks)

QUESTION 3

Education and training have been recognized as important components of organized safety programs for many years. Modern safety and health professionals have a key role to play in ensuring that all employees at all levels receive the appropriate types and amounts of training.

Discuss **FIVE (5)** methods that can be used by instructors in delivering training to employees in an organization.

(20 marks)

End of Paper